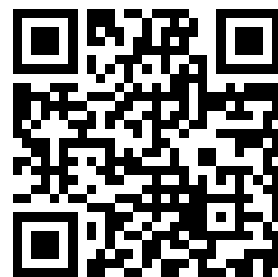

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**U.S. CIVIL AIRMEN
STATISTICS**



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PREFACE

The U.S. Civil Airmen Statistics is an annual study published to meet the demands of FAA, other government agencies, and industry for more detailed airmen statistics than those published in other FAA reports.

Statistics pertaining to airmen, both pilot and nonpilot, were obtained from the official airman certification records maintained at the FAA Aeronautical Center, Oklahoma City, Oklahoma.

This study was prepared in the Office of Management Systems, Information and Statistics Division, Information Operations Branch (AMS-220), by Patricia Wilson.

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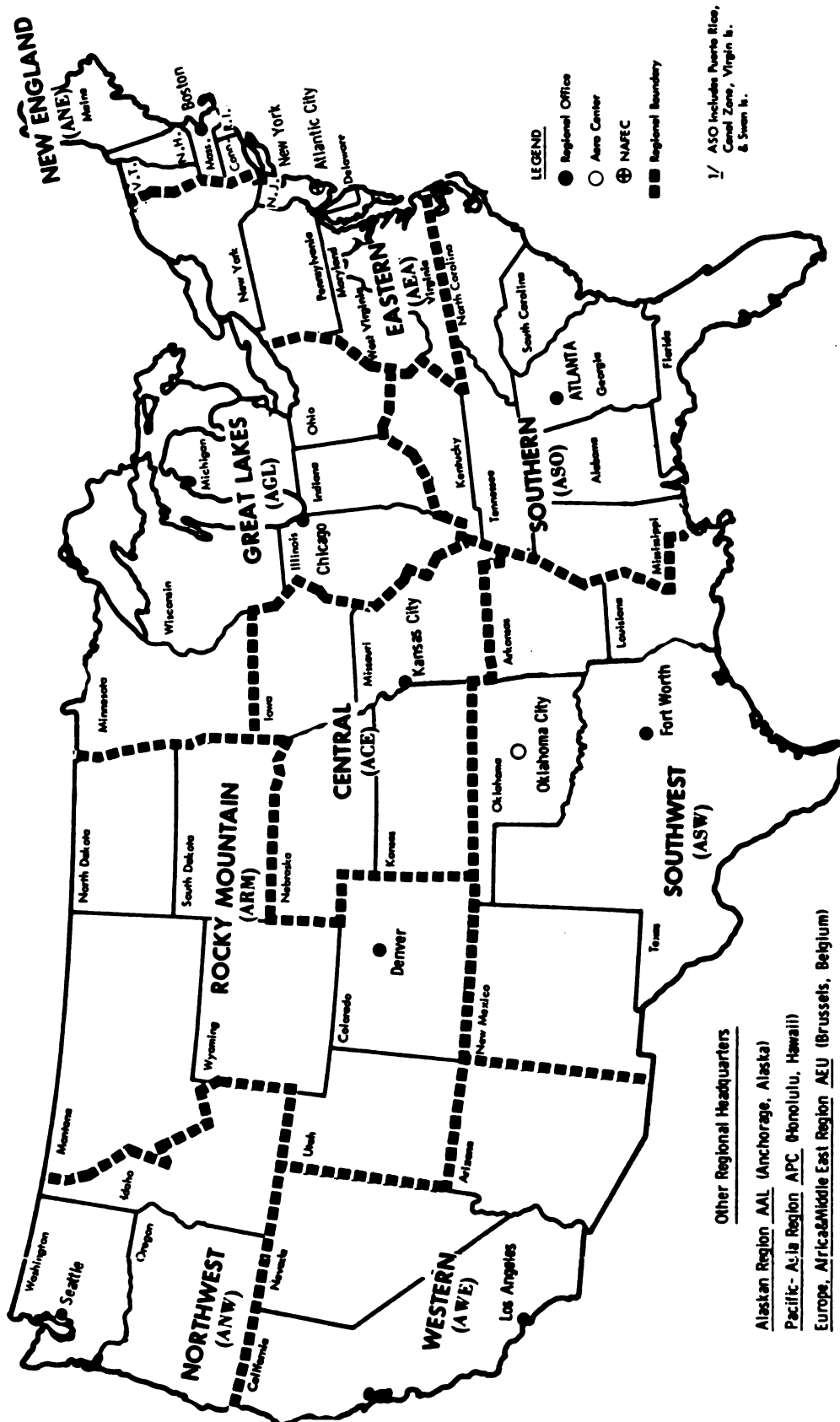
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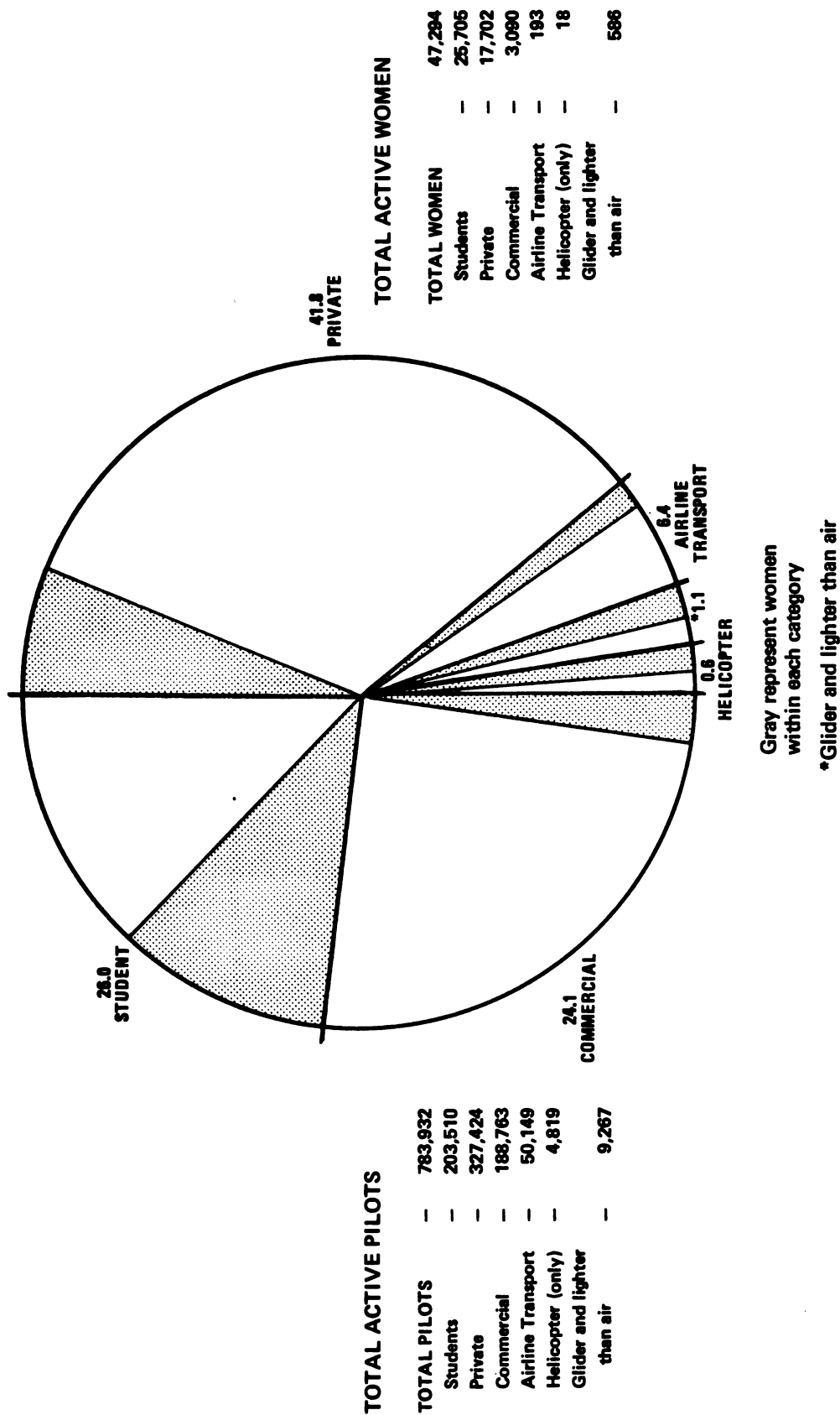
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FAA REGIONAL BOUNDARIES

Including Locations of Regional Headquarters & Centers



**Figure 2. Active Pilot Certificates Held:
December 31, 1977**



I. ACTIVE PILOT CERTIFICATES HELD

Table 1.--Active Pilot Certificates Held: December 31, 1968-1977

Category	1968	1969	1970	1971	1972	1973 3/	1974	1975	1976	1977
Pilot--total ...	691,695	720,028	732,729	741,009	750,869	714,607	733,728	728,187	744,246	783,932
Student	209,406	203,520	195,861	186,428	181,477	181,905	180,795	176,978	188,801	203,510
Private	281,728	299,491	303,779	312,656	321,413	298,921	305,848	305,863	309,005	327,424
Commercial	164,458	176,585	186,821	192,409	196,228	182,444	192,425	189,342	187,801	188,763
Airline transport	28,607	31,442	34,430	35,949	37,714	38,139	41,002	42,592	45,072	50,149
Helicopter (only)	3,166	4,286	6,677	7,992	7,987	5,968	5,647	4,932	4,804	4,819
Glider (only)1/*	2,193	2,627	3,114	3,571	4,080	4,288	4,824	5,348	5,789	6,208
Lighter-than-air1/*	2,137	2,077	2,047	2,004	1,970	2,942	3,187	3,132	2,974	3,059
Non-pilot--total .	250,151	269,775	289,681	307,057	315,348	304,747	314,394	323,934	334,681	348,584
Mechanic1/.....	158,211	170,716	184,647	193,295	201,700	193,337	198,863	205,436	212,303	220,768
Parachute rigger1/	5,700	6,070	6,424	6,839	7,287	6,941	7,900	8,327	8,718	8,994
Ground instructor1/	37,889	41,234	44,176	46,145	48,450	46,827	49,249	51,365	53,464	55,717
Dispatcher1/.....	4,766	5,026	5,293	5,480	5,637	5,527	5,576	5,741	5,838	5,972
Control tower operator	18,610	19,851	21,032	26,450	27,353	23,250	23,342	23,956	24,584	25,107
Flight navigator	2,966	3,011	2,950	3,052	2,957	2,636	2,509	2,321	2,214	2,155
Flight engineer .	22,009	23,867	25,159	25,796	25,964	26,229	26,955	26,788	27,560	29,871
Flight instructor certificates	30,361	33,992	37,822	37,760	37,858	36,795	42,418	44,777	46,236	49,362
Instrument ratings2/	139,346	155,879	169,848	179,261	187,909	185,969	199,323	203,954	211,364	226,334

1/Numbers represent all certificates on record. No medical examination required.

2/Special ratings shown on pilot certificates, i.e., do not indicate additional certificates.

3/The decrease in the number of airmen resulted from a purging of the airmen certification files. During this process approximately 26 thousand duplicates or faulty records were eliminated.

L/Revised

*Glider and lighter-than air pilots are not required to have a medical examination; however, the totals above are the pilots who received a medical.

Table 2.--Women Actively Engaged in Aviation: December 31, 1968-77

Category of certificates held	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Pilot--total	28,401	29,419	29,472	31,096	33,001	34,356	36,943	37,934	41,643	47,294
Student	16,234	16,055	15,787	16,417	17,053	18,593	19,298	19,600	22,254	25,705
Private	10,164	11,174	11,409	12,332	13,391	13,232	14,465	14,952	15,838	17,702
Commercial	1,691	1,824	1,897	2,032	2,196	2,083	2,596	2,733	2,857	3,090
Airline transport	71	76	79	88	101	95	116	137	160	193
Helicopter (only)	16	14	6	9	10	7	5	11	17	18
Glider (only)1/*	91	111	141	169	201	216	271	301	352	391
Lighter-than-air1/*	134	165	153	169	49	130	192	200	165	195
Nonpilot--total ...	2,707	2,912	3,078	3,413	3,594	3,074	3,471	3,809	4,252	4,716
Mechanic1/.....	229	269	302	322	349	284	315	360	422	505
Parachute rigger1/	445	449	461	470	483	336	495	504	516	535
Ground instructor1/	1,769	1,917	2,006	2,081	2,166	1,960	2,139	2,249	2,369	2,525
Dispatcher1/.....	30	36	38	39	40	39	42	50	55	65
Control tower operator	205	222	271	501	556	453	473	638	874	1,044
Flight engineer .	28	18	0	0	0	2	7	8	16	42
Flight navigator.	1	1	0	0	0	0	0	0	0	0
Flight instructor.	531	560	589	646	664	618	834	945	1,054	1,238

NOTE: Instrument ratings not reported.

1/No medical examination required.

*Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above are the pilots who received a medical.

Table 3. Active Pilots and Nonpilots Certificates Held, by Class of Certificate, by FAA Region: December 31, 1977

Class of certificate	Total	New England	Eastern	Great Lakes	Central	Southern	Southwest	Rocky Mountain	Western	Northeast	Alaskan	Pacific	Foreign
Total	783,932	33,219	103,672	137,788	51,726	116,399	95,163	40,304	134,039	63,656	10,551	3,241	14,166
Total--all groups	203,510	9,015	28,060	37,020	13,732	30,599	23,774	11,075	31,526	11,144	2,815	712	4,038
Student pilots--total	227,424	13,070	42,116	64,852	24,631	44,218	37,421	16,882	57,158	18,960	4,374	970	2,781
Private pilots--total	319,739	12,721	40,862	63,690	24,262	43,000	36,637	16,578	55,680	18,495	4,297	899	2,668
Private airplane (only).....	3,928	226	720	640	150	505	346	180	901	166	27	24	35
Private airplane, private glider.....	515	33	94	83	15	50	41	31	117	35	0	9	6
Private airplane, private gyroplane.....	28	2	1	7	2	3	6	6	4	3	0	0	0
Private airplane, private helicopter.....	840	31	141	148	53	133	78	19	129	87	3	2	16
Private airplane, private glider, private helicopter.....	30	3	6	4	0	7	2	0	7	1	0	0	0
Private airplane, commercial helicopter.....	2,322	54	279	267	148	517	311	123	317	169	46	35	56
Private airplane, private glider, commercial helicopter.....	12	0	2	2	1	1	0	0	2	4	0	0	0
Private airplane, commercial glider, commercial helicopter.....	9	0	1	3	0	2	0	1	1	0	0	1	0
Private airplane, commercial gyroplane, commercial helicopter.....	1	0	0	1	0	0	0	0	0	0	0	0	0
Commercial pilots--total	188,763	7,539	24,647	27,843	10,824	31,046	26,241	9,312	32,750	10,530	2,648	1,055	4,328
Commercial airplane (only)	162,277	6,555	21,029	24,432	9,626	25,793	22,471	8,138	28,058	8,943	2,232	820	3,780
Commercial airplane, private glider.....	2,051	83	334	304	83	282	204	109	496	104	15	15	22
Commercial airplane, commercial glider.....	4,381	233	684	626	175	651	513	251	905	227	42	28	46
Commercial airplane, commercial gyroplane.....	3	0	0	0	0	1	0	0	2	2	0	0	0
Commercial airplane, private helicopter.....	168	7	14	29	9	35	12	5	35	15	4	0	3
Commercial airplane, commercial glider, private helicopter.....	7	0	2	2	0	1	0	0	2	2	0	0	0
Commercial airplane, commercial helicopter.....	19,028	623	2,464	1,938	898	4,144	2,938	767	3,078	1,183	543	182	470
Commercial airplane, private glider, commercial helicopter.....	135	7	24	24	2	22	16	4	26	8	0	1	1
Commercial airplane, commercial glider, commercial helicopter.....	626	25	91	76	27	105	76	34	128	42	8	8	6
Commercial airplane, commercial gyroplane.....	35	3	1	5	2	5	6	1	8	3	0	1	0
Commercial airplane, commercial gyroplane, commercial helicopter.....	34	3	3	3	2	2	5	3	8	4	1	0	0
Commercial airplane, commercial gyroplane, commercial helicopter, commercial glider.....	18	0	1	4	0	5	0	0	4	1	3	0	0
Airline transport pilots--total	50,149	2,931	6,575	6,184	2,006	8,410	6,085	2,086	9,823	2,346	618	365	2,720
Airline transport airplane.....	49,698	2,906	6,498	6,142	1,988	8,344	6,024	2,069	9,740	2,317	606	362	2,702
Airline transport airplane, airline transport helicopter.....	451	25	77	42	18	66	61	17	83	29	12	3	18

Monocraft (only) pilots--total.....	4,819	117	525	433	224	1,212	910	169	522	311	76	57	192
Private gyroplane.....	5	0	0	1	0	1	1	1	1	0	0	0	0
Private helicopter.....	302	6	55	64	15	45	31	3	39	27	1	4	12
Commercial helicopter.....	4,425	110	523	363	206	1,157	866	165	463	281	72	52	163
Commercial helicopter, private glider.....	1	0	0	1	0	0	0	0	0	0	0	0	0
Commercial helicopter, commercial glider.....	9	0	2	0	1	3	1	0	1	0	0	0	1
Commercial helicopter, commercial gyroplane.....	3	0	0	1	1	1	0	0	0	0	0	0	0
Airline transport helicopter.....	74	1	9	3	3	5	11	0	18	3	3	1	17
Glider (only)--total.....	6,208	404	1,252	828	130	407	386	651	1,725	265	11	75	74
Private glider.....	5,187	322	1,049	691	89	347	295	551	1,483	225	7	63	65
Commercial glider.....	1,021	82	203	137	41	60	91	100	242	40	4	12	9
Lighter-than-air.....	3,052	143	429	635	187	507	346	129	535	100	2	7	32
Total--all nonpilot.....	348,584	17,299	60,006	44,383	18,885	53,776	41,880	12,569	67,434	16,853	3,206	2,660	11,633
Mechanic 1/.....	270,746	11,504	40,487	27,199	12,745	31,431	26,088	6,861	44,485	8,890	2,007	1,902	6,751
Parachute rigger 1/.....	8,594	394	1,445	1,203	418	1,600	1,007	550	1,411	668	115	44	221
Ground instructor 2/.....	55,171	2,647	8,819	8,750	3,533	8,488	7,281	2,652	9,423	2,375	582	222	44
Dispatcher 1/.....	25,972	126	1,369	426	133	960	300	149	872	171	105	103	1,258
Control tower operator.....	25,107	775	3,419	3,159	1,204	5,546	3,782	1,028	3,631	1,032	290	249	922
Flight navigator.....	2,155	226	3,412	61	12	300	96	47	692	134	9	147	147
Flight engineer.....	25,871	1,827	3,635	3,585	842	5,431	3,326	1,282	6,920	1,583	120	121	1,199
Flight instructor certificates--total.....	49,362	2,084	7,091	8,478	2,931	7,356	6,467	2,472	9,072	2,928	642	207	634
Instrument ratings 2/.....	226,334	9,747	31,160	34,601	11,797	38,223	29,435	9,750	40,028	11,427	2,430	1,311	6,425

1/ Total ratings issued to date. These ratings retain their validity without periodic medical examinations.
2/ Special ratings shown on pilot certificates, i.e., do not indicate additional ratings.

**Figure 3. Total Active Pilots:
December 31, 1977**

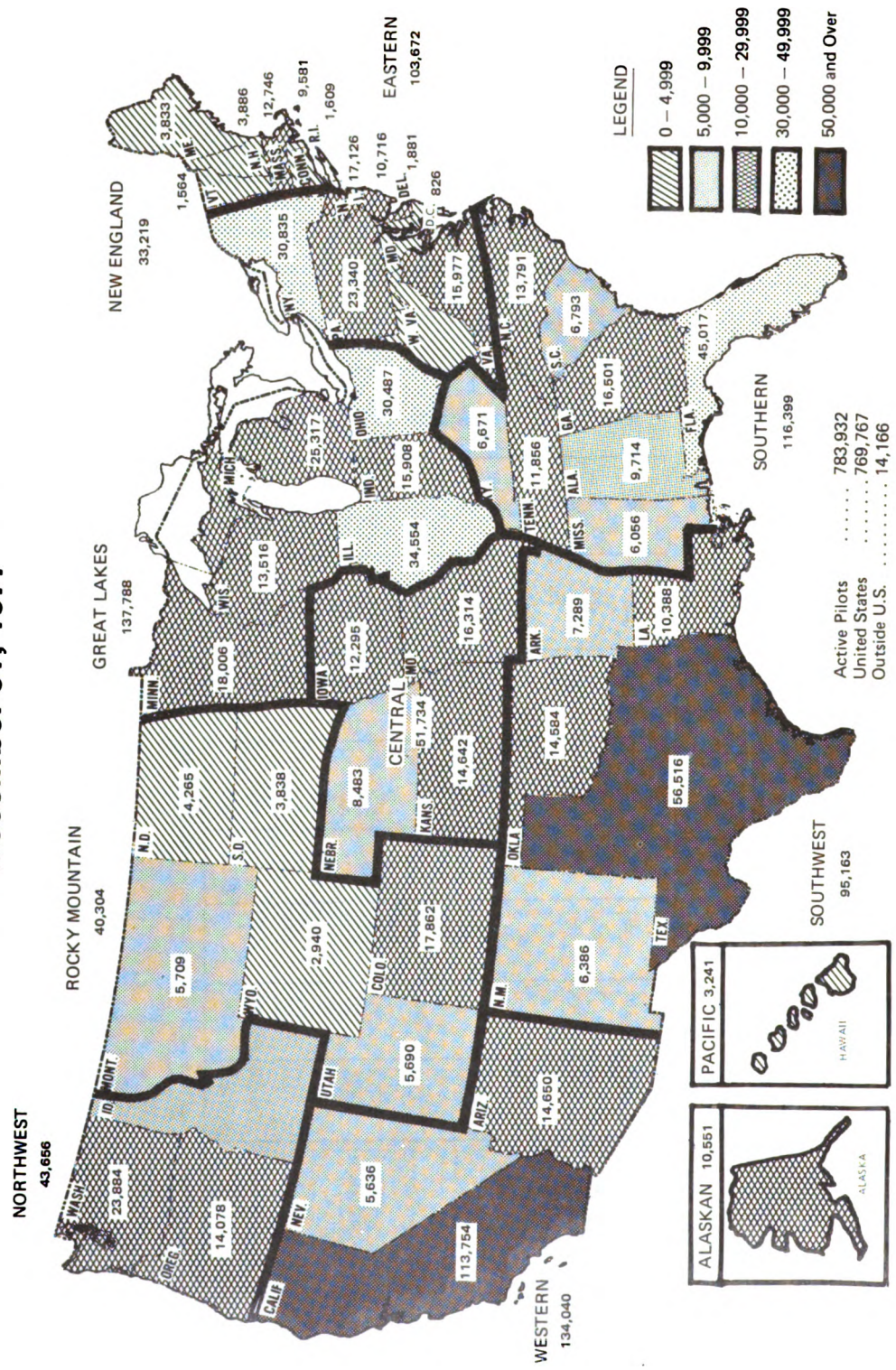


Table 4.--Active Pilots and Flight Instructors by FAA Region and State:
December 31, 1977

FAA region and state	Total pilots	Student	Private	Commercial	Airline transport	Miscellaneous 2/	Flight instructor 3/
Total	783,932 1/	203,510	327,424	188,763	50,149	14,086	49,362
United States--total ..	769,767	199,472	324,643	184,435	47,429	13,788	48,728
New England--total	33,219	9,015	13,070	7,539	2,931	664	2,084
Maine	3,833	1,144	1,567	960	122	40	197
New Hampshire	3,886	959	1,264	1,042	539	82	220
Rhode Island	1,609	483	657	365	80	24	115
Massachusetts	12,746	3,739	5,375	2,619	717	296	777
Connecticut	9,581	2,270	3,511	2,208	1,401	191	686
Vermont	1,564	420	696	345	72	31	89
Eastern--total	103,672	28,060	42,114	24,647	6,575	2,276	7,091
New York	30,835	8,949	12,984	6,435	1,637	830	2,028
Pennsylvania	23,340	6,540	10,080	4,909	1,336	475	1,691
Virginia	15,977	3,800	5,427	5,320	1,131	299	1,004
Maryland	10,716	2,767	4,545	2,683	521	200	700
West Virginia	2,971	938	1,242	611	128	52	194
Delaware	1,881	405	785	500	162	29	154
New Jersey	17,126	4,441	6,725	3,973	1,635	352	1,271
District of Columbia ..	826	220	326	216	25	39	49
Great Lakes--total	137,788	37,020	64,845	27,843	6,184	1,896	8,478
Illinois	34,554	9,023	15,610	7,166	2,170	585	2,195
Indiana	15,908	4,546	7,591	3,130	473	168	1,009
Minnesota	18,006	4,443	8,441	3,898	1,052	172	924
Michigan	25,317	7,055	12,229	4,712	939	382	1,542
Ohio	30,487	8,268	14,317	6,413	1,039	450	2,054
Wisconsin	13,516	3,685	6,657	2,524	511	139	754
Central--total	51,734	13,732	24,631	10,824	2,006	541	2,931
Kansas	14,642	3,727	7,029	3,167	573	146	800
Iowa	12,295	3,503	6,186	2,229	258	119	647
Missouri	16,314	4,134	7,362	3,598	990	230	1,037
Nebraska	8,483	2,368	4,054	1,830	185	46	447
Southern--total	116,399	30,599	44,218	31,046	8,410	2,126	7,356
North Carolina	13,791	3,917	5,566	3,457	547	304	774
South Carolina	6,793	2,009	2,550	1,894	256	84	415
Georgia	16,501	4,021	5,666	4,486	2,019	309	986
Florida	45,017	11,060	16,841	12,407	4,064	645	2,838
Mississippi	6,056	1,665	2,290	1,848	190	63	390
Alabama	9,714	2,494	3,741	2,883	325	271	793
Tennessee	11,856	3,292	4,817	2,687	810	250	784
Kentucky	6,671	2,141	2,747	1,384	199	200	376
Southwest--total	95,163	23,774	37,421	26,241	6,085	1,642	6,467
Louisiana	10,388	2,760	3,750	3,139	474	265	696
Oklahoma	14,584	3,790	6,649	3,432	547	166	943
Texas	56,516	13,453	21,376	16,012	4,666	1,009	3,956
New Mexico	6,386	1,646	2,774	1,613	206	147	416
Arkansas	7,289	2,125	2,872	2,045	192	55	456
Rocky Mountain--total	40,304	11,075	16,882	9,312	2,086	949	2,472
Colorado	17,862	4,492	6,744	4,371	1,530	725	1,242
Wyoming	2,940	946	1,266	602	105	21	189
Utah	5,690	1,605	2,539	1,204	241	101	312
Montana	5,709	1,627	2,658	1,261	122	41	322
North Dakota	4,265	1,272	1,870	1,071	32	20	217
South Dakota	3,838	1,133	1,805	803	56	41	190
Western--total	134,039	31,526	57,158	32,750	9,823	2,782	8,072
California	113,753	26,498	48,892	27,586	8,450	2,327	6,803
Arizona	14,650	3,689	6,051	3,767	754	389	900
Nevada	5,636	1,339	2,215	1,397	619	66	369
Northwest--total	43,656	11,144	18,960	10,530	2,346	676	2,928
Washington	23,884	5,583	9,652	6,388	1,800	461	1,686
Oregon	14,078	3,983	6,728	2,857	350	160	863
Idaho	5,694	1,578	2,580	1,285	196	55	379
Alaskan region--total	10,551	2,815	4,374	2,648	618	96	642
Pacific region--total	3,241	712	970	1,055	365	139	207
Outside U.S.--total	14,166	4,038	2,781	4,328	2,720	299	634

1/ Includes Outside U.S.

2/ Includes glider helicopter, and lighter-than-air.

3/ Not included in total.

Note: Puerto Rico and Virgin Islands are included in Outside U.S. total.

**Figure 4. Total Women Pilots:
December 31, 1977**

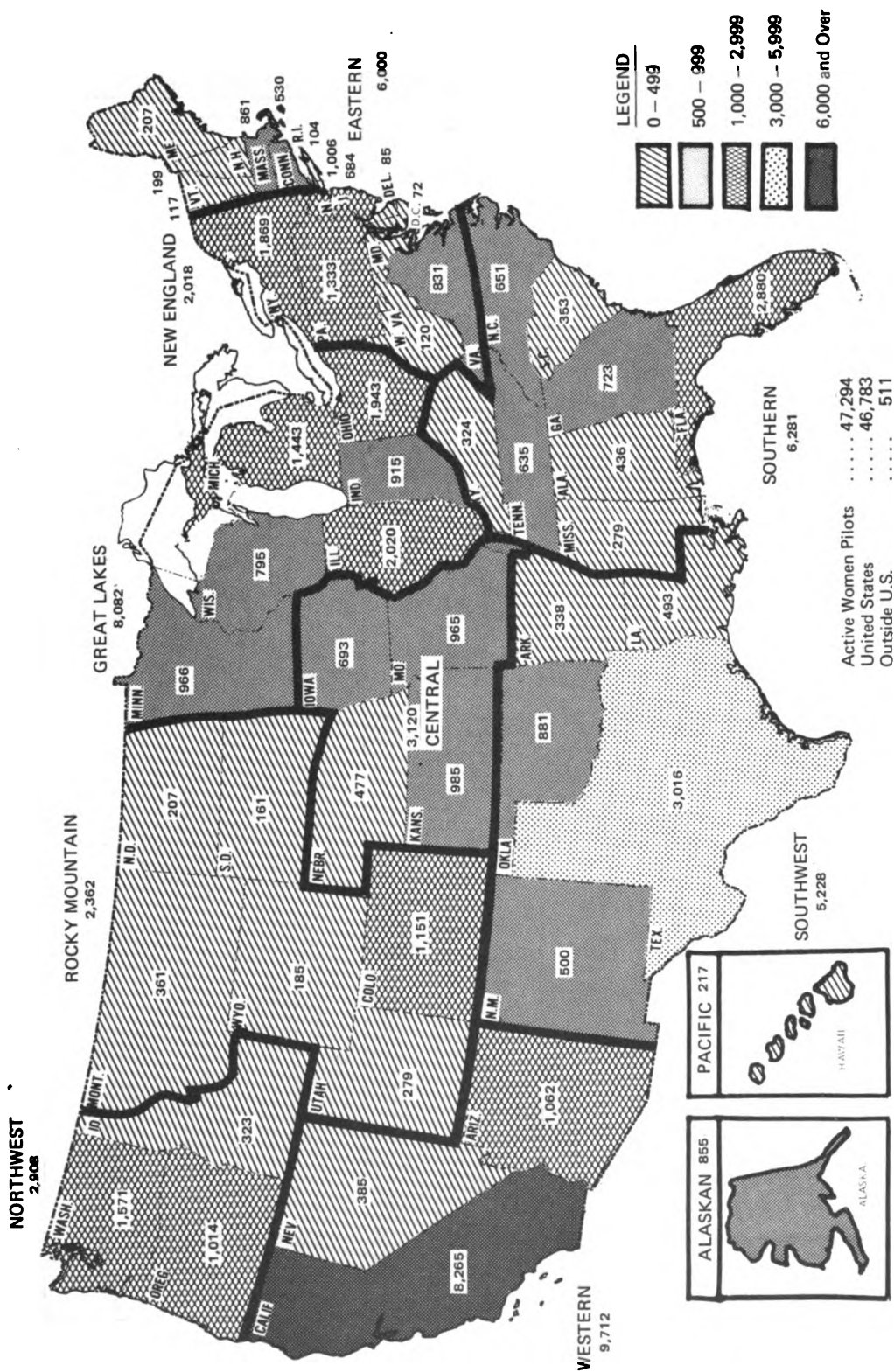


Table 5.--Active Women Pilots and Flight Instructors by FAA Region and State:
December 31, 1977

FAA region and state	Total pilots	Student	Private	Commercial	Airline transport	Miscellaneous 2/	Flight instructor 3/
Total	47,294 1/	25,705	17,702	3,090	193	604	1,238
United States--total ..	46,783	25,371	17,577	3,047	191	597	1,228
New England--total	2,018	1,108	720	151	3	35	54
Maine	207	117	77	11	0	2	4
New Hampshire	199	120	63	16	0	0	7
Rhode Island	104	62	30	11	0	1	4
Massachusetts	861	474	306	63	2	16	25
Connecticut	530	280	197	40	2	11	10
Vermont	117	55	47	10	0	5	4
Eastern--total	6,000	3,370	2,095	804	17	114	161
New York	1,869	1,013	691	104	4	57	46
Pennsylvania	1,333	763	447	100	6	17	47
Virginia	831	467	296	59	3	6	21
Maryland	684	376	249	48	2	9	16
West Virginia	120	78	36	4	0	2	0
Delaware	85	44	35	5	0	1	2
New Jersey	1,006	586	321	77	2	20	27
District of Columbia ..	72	43	20	7	0	2	2
Great Lakes--total	8,082	4,277	3,192	498	33	82	209
Illinois	2,020	1,043	823	121	10	23	51
Indiana	915	498	346	66	2	3	26
Minnesota	966	509	400	46	3	8	19
Michigan	1,443	763	548	101	6	25	40
Ohio	1,943	1,028	750	137	9	19	62
Wisconsin	795	436	325	27	3	4	11
Central--total	3,120	1,635	1,275	173	8	29	79
Kansas	985	473	444	53	5	10	29
Iowa	693	381	268	36	0	8	14
Missouri	965	527	369	59	2	8	24
Nebraska	477	254	194	25	1	3	12
Southern--total	6,281	3,713	2,107	388	32	41	171
North Carolina	651	398	206	41	1	5	19
South Carolina	353	214	104	25	3	7	12
Georgia	723	448	223	40	5	7	19
Florida	2,880	1,619	1,050	178	18	15	78
Mississippi	279	173	82	21	1	2	9
Alabama	436	267	143	24	0	2	8
Tennessee	635	380	207	43	2	3	17
Kentucky	324	214	92	16	2	0	9
Southwest--total	5,228	2,868	1,934	354	21	51	153
Louisiana	493	291	157	38	3	4	19
Oklahoma	881	460	361	56	1	3	21
Texas	3,016	1,662	1,124	194	15	21	86
New Mexico	500	257	186	33	2	22	15
Arkansas	338	198	106	33	0	1	12
Rocky Mountain--total	2,362	1,329	870	119	8	36	50
Colorado	1,151	630	424	65	5	27	28
Wyoming	185	115	59	11	0	0	3
Utah	297	160	115	12	3	7	8
Montana	361	215	127	18	0	1	5
North Dakota	207	118	78	11	0	0	6
South Dakota	161	91	67	2	0	1	0
Western--total	9,712	4,923	3,863	714	53	159	256
California	8,265	4,158	3,320	606	48	133	224
Arizona	1,062	548	400	86	3	25	22
Nevada	385	217	143	22	2	1	10
Northwest--total	2,908	1,556	1,129	179	7	37	62
Washington	1,571	790	644	104	6	27	29
Oregon	1,014	576	375	56	0	7	23
Idaho	323	190	110	19	1	3	10
Alaskan region--total	855	475	321	53	5	1	23
Pacific region--total	217	117	71	14	3	12	10
Outside U.S.--total	511	334	125	43	2	7	10

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and lighter-than-air.

3/ Not included in total.

Note: Puerto Rico and Virgin Islands are included in Outside U.S. total.

Table 6.--Active Helicopter Pilots by Class of
Certificates: December 31, 1977

Class of certificates	Number of certificates held
Total	28,566
Private helicopter	302
Private gyroplane, private airplane	28
Private helicopter, private airplane	840
Private helicopter, private airplane, private glider	30
Commercial airplane, private helicopter	168
Commercial airplane, commercial gyroplane, commercial glider, commercial helicopter	18
Commercial airplane, commercial glider, private helicopter	7
Private gyroplane	5
Private airplane, commercial glider, commercial helicopter	9
Commercial helicopter	4,425
Private airplane, commercial helicopter	2,322
Commercial airplane, commercial helicopter	19,028
Private airplane, private glider, commercial helicopter	12
Commercial airplane, private glider, commercial helicopter	135
Commercial airplane, commercial glider, commercial helicopter	626
Commercial helicopter, private glider	1
Commercial helicopter, commercial glider	9
Commercial gyroplane, commercial airplane	34
Commercial airplane, commercial gyroplane, commercial glider	3
Commercial airplane, commercial gyroplane, commercial helicopter	35
Commercial gyroplane, commercial helicopter, private airplane	1
Commercial helicopter, commercial gyroplane	3
Airline transport helicopter	74
Airline transport airplane, airline transport helicopter	451

Table 7.--Active Glider Pilots by Class of Certificates:
December 31, 1977

Class of certificates	Number of certificates held
Total	17,933
Private glider	5,187
Private airplane, private glider	3,928
Private airplane, private glider, private helicopter	30
Private airplane, private glider, commercial helicopter	12
Commercial airplane, private glider	2,051
Commercial airplane, private glider, commercial helicopter	135
Commercial helicopter, private glider	1
Private airplane, commercial glider	515
Private airplane, commercial glider, commercial helicopter	9
Commercial glider	1,021
Commercial airplane, commercial glider	4,381
Commercial airplane, commercial glider, private helicopter	7
Commercial airplane, commercial glider, commercial helicopter	626
Commercial helicopter, commercial glider	9
Commercial airplane, commercial gyroplane, commercial glider and commercial helicopter.	18
Commercial airplane, commercial gyroplane, commercial glider	3

Table 8.--Active Helicopter and Glider
Pilots: December 31, 1973-77

Calendar year	Total helicopter pilots ^{1/}		Total glider pilots ^{2/}	
	Number	Percent change	Number	Percent change
1977	28,566	+3	17,933	+6
1976	27,816	-1	16,866	+6
1975	27,872	-3	15,962	+6
1974	28,618	+18	15,013	+40
1973	24,352	-22	10,723	-20

^{1/}Includes pilots with ratings to fly helicopters only.

^{2/}Includes pilots with ratings to fly gliders only.

Table 9.--Total and Instrument Rated Pilots
December 31, 1973-77

Calendar Year	Total pilots ^{1/}	Instrument rated Pilots	
		Number	Percent of total
1977	580,422	226,334	39
1976	555,625	211,364	38
1975	551,209	203,954	37
1974	552,933	199,323	36
1973	532,702	185,696	35

^{1/}Excludes student pilots.

Table 10.--Airline Transport Certificates Held, by
Selected Age Groups: 1968-77

Year	Total	Age group		
		20-34 years	35-44 years	45 years and over
		Number		
1968	28,607	4,481	9,990	14,136
1969	31,442	5,611	10,510	15,321
1970	34,430	6,814	11,183	16,433
1971	35,949	7,087	11,838	17,024
1972	37,714	7,536	12,532	17,646
1973	38,139	7,588	12,587	17,964
1974	41,002	8,832	13,511	18,659
1975	42,592	9,242	14,028	19,322
1976	45,072	10,246	14,649	20,177
1977	50,149	11,847	16,663	21,639
		Percent distribution		
1968	100.0	15.7	34.9	49.4
1969	100.0	17.9	33.4	48.7
1970	100.0	19.8	32.5	44.7
1971	100.0	19.7	32.9	47.4
1972	100.0	20.0	33.2	46.8
1973	100.0	19.9	33.0	47.1
1974	100.0	21.5	33.0	45.5
1975	100.0	21.7	32.9	45.4
1976	100.0	22.7	32.5	44.8
1977	100.0	23.6	33.2	43.1

Table 11.--Active Pilot Certificates Held, by Category and Age group of Holder: 1977, 1976, 1973

Age group	Type of pilot certificates																		
	Total active pilots				Student				Private airplane				Commercial airplane				Airline transport		
	1977	1976	1973		1977	1976	1973		1977	1976	1973		1977	1976	1973		1977	1976	1973
Total.....	783,933	744,246	714,607		203,510	188,801	181,905		327,424	309,005	298,921		188,763	187,801	182,444		50,149	45,072	38,139
14-15	381	408	0		381	408	0		7,289	7,503	6,909		0	0	0		0	0	0
16-19	31,993	31,063	30,962		24,075	22,881	23,265		35,712	34,067	31,442		9,773	10,405	10,151		356	264	114
20-24	93,318	89,665	88,196		46,224	43,540	44,432		45,439	42,586	39,343		24,604	28,197	35,540		3,412	3,066	2,414
25-29	117,322	115,012	116,751		41,095	38,038	35,483		47,508	43,711	41,802		37,175	37,129	35,176		8,079	6,916	5,059
30-34	127,721	118,760	110,142		31,983	28,537	26,220		42,565	39,250	39,820		32,478	30,990	27,668		8,179	6,993	6,061
35-39	106,092	97,822	93,350		21,277	19,155	18,552		37,383	36,633	41,534		26,722	26,247	22,949		8,484	7,656	6,526
40-44	88,244	85,569	86,312		14,453	13,881	14,183		40,253	40,338	42,204		19,159	17,254	16,088		7,055	6,214	5,435
45-49	79,126	75,761	74,680		11,426	10,759	9,963		35,534	32,842	28,990		15,508	17,006	20,622		5,719	6,103	7,728
50-54	64,834	63,322	63,889		7,032	6,564	5,731		20,701	18,775	16,139		15,165	13,608	9,321		6,473	5,919	3,587
55-59	46,738	42,322	32,225		3,476	3,197	2,700		15,040	13,498	10,738		7,842	6,586	4,458		2,392	1,941	1,214
60 and over.	28,164	24,542	18,100		2,088	1,841	1,376												
Total	Type of pilot certificates																		
	Helicopter (only)				Glider (only)				Lighter-than-air				Flight instructor J/						
	1977	1976	1973		1977	1976	1973		1977	1976	1973		1977	1976	1973				
14-15	0	0	0		0	0	0		0	0	0		0	0	0				
16-19	10	9	5		264	276	292		18	15	19		102	118	127				
20-24	213	297	1,056		966	1,010	765		74	82	227		4,256	4,044	3,149				
25-29	1,609	2,033	3,077		999	936	576		164	154	312		7,768	7,944	7,755				
30-34	1,865	1,500	1,016		882	751	469		229	216	397		10,076	9,444	7,426				
35-39	608	510	409		633	570	419		352	354	421		7,877	7,028	5,213				
40-44	284	243	212		492	459	428		426	450	481		6,230	5,581	3,900				
45-49	148	140	111		572	547	459		513	509	421		4,512	4,034	3,111				
50-54	53	44	41		534	495	421		454	468	356		3,395	3,436	3,182				
55-59	21	17	17		465	408	267		437	398	194		3,106	2,825	1,812				
60 and over.	8	11	7		401	337	192		393	328	114		2,040	1,782	1,116				

J/ Not included in total active pilots.

Table 12.--Instrument Ratings Held, by Class of Certificates: December 31, 1976 and 1977

Class of certificates	1977	1976	Percent change 1976-1977
Total--all groups	226,334	211,364	+7
Private pilots--total	<u>29,367</u>	<u>25,393</u>	<u>+16</u>
Private airplane (only)	27,243	23,462	+16
Private airplane, private glider	674	619	+9
Private airplane, commercial glider	56	50	+12
Private airplane, private helicopter	180	153	+18
Private airplane, private glider, private helicopter	9	8	+12
Private airplane, commercial helicopter	1,188	1,088	+9
Private airplane, private gyroplane	3	1	+200
Private airplane, private glider, commercial helicopter	8	6	+33
Private airplane, commercial glider, commercial helicopter	5	5	0
Private airplane, other	1	1	0
Commercial pilots--total	<u>144,248</u>	<u>138,433</u>	<u>+4</u>
Commercial airplane (only)	122,426	117,490	+4
Commercial airplane, private glider	1,580	1,393	+13
Commercial airplane, commercial glider	3,280	3,157	+4
Commercial airplane, private helicopter	119	77	+54
Commercial airplane, commercial helicopter	16,103	15,630	+3
Commercial airplane, private glider, commercial helicopter	117	103	+14
Commercial airplane, commercial glider, commercial helicopter	552	512	+8
Commercial airplane, commercial gyroplane	22	22	0
Commercial airplane, commercial helicopter, commercial gyroplane	25	24	+4
Commercial airplane, commercial gyroplane, commercial glider	2	3	-33
Commercial airplane, commercial glider, private helicopter	6	7	-14
Commercial airplane, commercial gyroplane, commercial helicopter, commercial glider	16	15	+7
Airline transport pilots--total	<u>50,149</u>	<u>45,072</u>	<u>+11</u>
Airline transport airplane	49,698	44,704	+11
Airline transport airplane, airline transport helicopter	451	368	+23
Rotorcraft pilots--total	<u>2,570</u>	<u>2,466</u>	<u>+4</u>
Commercial helicopter	2,535	2,439	+4
Airline transport helicopter	25	17	+47
Rotorcraft, other	10	10	0

Table 13.--Instrument Ratings Held, by Class of Certificate, by FAA Region: December 31, 1977

Class of Certificate	Total	New England	Eastern	Great Lakes	Central	Southern	Southwest	Rocky Mountain	Western	Northwest	Alaskan	Pacific	Foreign
Total--all groups.....	226,334	9,747	31,160	34,601	11,797	38,223	29,435	9,750	40,028	11,427	2,430	1,311	6,425
Private pilots--total.....	29,367	1,073	4,656	6,619	1,864	4,362	3,145	960	5,082	1,270	115	44	177
Private airplane (only).....	27,243	985	4,337	6,355	1,748	3,913	2,871	855	4,791	1,140	85	19	144
Private airplane, private glider.....	674	47	138	119	22	94	52	22	150	18	2	0	10
Private airplane, commercial glider.....	56	2	8	8	1	8	5	4	11	9	0	0	0
Private airplane, private helicopter.....	180	8	30	32	8	29	20	3	29	18	2	0	1
Private airplane, private glider.....	9	0	3	2	0	0	1	0	3	0	0	0	0
Private helicopter, private airplane, commercial helicopter.....	1,188	29	137	100	84	316	196	75	97	81	26	25	22
Private airplane, private gyroplane.....	3	2	0	0	1	0	0	0	0	0	0	0	0
Private airplane, private glider.....	8	0	2	1	0	1	0	0	0	4	0	0	0
Private airplane, commercial glider, commercial helicopter.....	5	0	1	1	0	1	0	1	1	0	0	0	0
Private airplane, other.....	1	0	0	1	0	0	0	0	0	0	0	0	0
Commercial pilots--total.....	144,248	5,665	19,624	21,609	7,812	24,685	19,733	6,611	24,886	7,650	1,657	864	3,452
Commercial airplane (only).....	122,426	4,841	16,574	19,078	6,821	20,144	16,686	5,691	21,180	6,430	1,339	660	2,982
Commercial airplane, private glider.....	1,580	61	261	239	56	223	153	85	391	72	11	10	18
Commercial airplane, commercial glider.....	3,280	177	515	500	138	493	365	178	664	155	30	22	43
Commercial airplane, private helicopter.....	119	6	9	24	6	26	10	4	23	8	1	0	2
Commercial airplane, commercial helicopter.....	16,103	548	2,159	1,664	764	3,669	2,430	616	2,489	933	267	164	400
Commercial airplane, private glider, commercial helicopter.....	117	7	24	21	2	18	14	4	18	8	0	0	1
Commercial airplane, commercial glider, commercial helicopter.....	552	22	78	71	23	100	68	30	102	38	7	7	6
Commercial airplane, commercial gyroplane.....	22	2	2	2	0	2	3	2	6	3	0	0	0
Commercial airplane, commercial helicopter.....	25	1	0	4	2	4	4	1	6	2	0	1	0
Commercial gyroplane.....	2	0	0	0	0	1	0	0	1	0	0	0	0
Commercial airplane, commercial glider, private helicopter.....	6	0	1	2	0	1	0	0	2	0	0	0	0
Commercial airplane, commercial gyroplane, commercial helicopter.....	16	0	1	4	0	4	0	0	4	1	2	0	0
Airline transport pilots--total.....	50,149	2,931	6,575	6,184	2,006	8,410	6,085	2,006	9,823	2,346	618	365	2,720
Airline transport airplane.....	49,698	2,906	6,498	6,142	1,988	8,344	6,024	2,069	9,740	2,317	606	362	2,702
Airline transport airplane, airline transport helicopter.....	451	25	77	42	18	66	61	17	83	29	12	3	18
Motorcraft pilots--total.....	2,370	78	305	189	115	766	472	92	237	161	40	38	76
Commercial helicopter.....	2,535	77	303	186	112	758	467	93	229	161	40	38	71
Airline transport helicopter.....	25	1	2	2	2	3	4	0	7	0	0	0	4
Other.....	10	0	0	1	1	5	1	0	1	0	0	0	1

II. ACTIVE NONPILOT CERTIFICATES HELD

Table 14.--Active Nonpilot Airmen Certificates Issued, by FAA Region and State:
December 31, 1977 1/

FAA region and state	Total nonpilot airmen	Mechanic	Parachute rigger	Ground instructor	Dispatcher	Control tower operator	Flight navigator	Flight engineer
Total.....	348,584	220,766	8,994	55,717	5,972	25,107	2,155	29,871
United States--total.	336,951	213,817	8,873	54,752	4,714	24,115	2,008	28,672
New England--total	17,299	11,304	394	2,647	126	775	226	1,827
Maine	1,095	627	42	232	11	122	4	57
New Hampshire	1,628	648	27	263	13	203	27	447
Rhode Island	900	582	48	189	4	31	4	42
Massachusetts	8,359	6,361	179	1,119	60	252	25	363
Connecticut	4,858	2,814	86	719	35	147	164	893
Vermont	459	272	12	125	3	20	2	25
Eastern--total	60,006	40,887	1,465	8,819	1,369	3,419	412	3,635
New York	25,547	18,471	357	3,269	1,052	1,230	152	1,016
Pennsylvania	13,244	9,831	311	1,963	81	573	62	423
Virginia	5,371	2,489	351	942	105	764	45	675
Maryland	3,119	1,749	130	671	19	259	15	276
West Virginia	961	542	47	225	2	122	1	22
Delaware	938	605	22	149	7	87	8	60
New Jersey	10,256	6,819	222	1,473	87	371	129	1,155
District of Columbia ..	570	381	25	127	16	13	0	8
Great Lakes--total	44,383	27,199	1,203	8,750	426	3,159	61	3,585
Illinois	13,658	8,204	269	2,478	219	737	24	1,727
Indiana	4,396	2,685	184	874	25	446	5	177
Minnesota	7,316	4,516	140	1,152	93	378	8	1,029
Michigan	7,029	4,378	199	1,600	36	606	9	201
Ohio	8,729	5,505	284	1,891	40	754	12	243
Wisconsin	3,255	1,911	127	755	13	238	3	208
Central--total	18,885	12,743	418	3,533	133	1,204	12	882
Kansas	5,544	3,771	102	998	34	350	0	289
Iowa	2,662	1,663	90	649	9	189	0	62
Missouri	8,952	6,301	163	1,458	85	495	7	443
Nebraska	1,727	1,008	63	428	5	170	5	48
Southern--total	53,776	31,451	1,600	8,488	960	5,546	300	5,431
North Carolina	3,972	2,064	339	780	39	609	14	127
South Carolina	1,921	862	79	436	5	427	3	109
Georgia	10,452	5,947	272	1,211	180	815	20	2,007
Florida	25,304	15,646	423	3,755	590	1,895	230	2,765
Mississippi	1,620	781	43	404	7	325	6	54
Alabama	5,427	3,540	120	842	100	740	7	78
Tennessee	3,486	1,808	158	722	35	504	14	245
Kentucky	1,594	803	166	338	4	231	6	46
Southwest--total	41,880	26,088	1,007	7,281	300	3,782	96	3,326
Louisiana	3,548	2,149	95	631	22	413	3	235
Oklahoma	9,877	7,348	184	1,516	19	637	14	159
Texas	24,932	14,751	584	4,283	238	2,160	71	2,845
New Mexico	1,743	899	81	408	12	304	4	35
Arkansas	1,780	941	63	443	9	268	4	52
Rocky Mountain--total	12,569	6,861	550	2,652	149	1,028	47	1,282
Colorado	6,794	3,602	147	1,362	127	428	33	1,095
Wyoming	789	516	28	177	3	33	4	28
Utah	1,625	914	79	322	13	197	5	95
Montana	1,643	858	245	389	3	106	4	38
North Dakota	862	483	23	187	2	153	1	13
South Dakota	856	488	28	215	1	111	0	13
Western--total	67,434	44,485	1,411	9,423	872	3,631	692	6,920
California	60,270	40,132	1,201	8,128	830	2,951	598	6,430
Arizona	5,424	3,578	163	951	25	464	19	224
Nevada	1,740	775	47	344	17	216	75	266
Northwest--total	14,853	8,890	668	2,375	171	1,032	134	1,583
Washington	10,343	6,156	321	1,529	149	685	96	1,407
Oregon	3,039	1,884	217	558	17	198	33	132
Idaho	1,471	850	130	288	5	149	5	44
Alaskan Region--total	3,206	2,007	113	562	105	290	9	120
Pacific Region--total	2,660	1,902	44	222	103	249	19	121
Outside U.S.--total	11,633	6,951	121	965	1,258	992	147	1,199

NOTE: Puerto Rico and Virgin Islands are included in Outside of U.S. total.

1/ Data for control tower operators, flight engineers, and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers, and ground instructors, represent total ratings issued to date. These ratings retain their validity.

Table 15.--Active Women with Nonpilot Certificates Held, by FAA Region and State:
December 31, 1977 1/

FAA region and state	Total	Mechanic	Parachute rigger	Ground instructor	Dispatcher	Control tower operator	Flight engineer
Total.....	4,716	505	535	2,525	65	1,044	42
United States--total.	4,642	501	532	2,514	61	995	39
New England--total	196	18	26	118	1	31	2
Maine	20	1	4	11	0	4	0
New Hampshire	14	0	0	9	0	4	1
Rhode Island	22	0	12	8	0	2	0
Massachusetts	80	5	6	57	0	12	0
Connecticut	54	12	3	28	1	9	1
Vermont	6	0	1	5	0	0	0
Eastern--total	627	54	61	352	18	141	1
New York	243	22	13	131	16	60	1
Pennsylvania	116	8	10	76	0	22	0
Virginia	92	3	29	36	0	24	0
Maryland	47	1	3	28	0	15	0
West Virginia	18	7	0	6	0	5	0
Delaware	12	3	1	5	1	2	0
New Jersey	88	10	4	61	1	12	0
District of Columbia ..	11	0	1	9	0	1	0
Great Lakes--total	660	88	49	407	3	110	3
Illinois	199	22	9	132	1	33	2
Indiana	68	6	18	36	0	8	0
Minnesota	48	6	3	26	1	12	0
Michigan	124	22	4	77	0	21	0
Ohio	164	27	10	99	0	27	1
Wisconsin	57	5	5	37	1	9	0
Central--total	261	38	21	154	0	47	1
Kansas	86	20	6	48	0	11	1
Iowa	54	10	2	37	0	5	0
Missouri	95	7	11	55	0	22	0
Nebraska	26	1	2	14	0	9	0
Southern--total	915	64	125	472	13	233	8
North Carolina	102	4	37	39	0	22	0
South Carolina	42	2	1	24	0	15	0
Georgia	80	3	8	46	1	20	2
Florida	336	44	22	193	11	61	5
Mississippi	45	2	4	26	0	13	0
Alabama	174	2	6	90	1	75	0
Tennessee	84	1	36	30	0	17	0
Kentucky	52	6	11	24	0	10	1
Southwest--total	703	50	121	364	3	160	5
Louisiana	49	1	2	32	0	14	0
Oklahoma	145	16	16	77	0	36	0
Texas	424	28	86	212	3	90	5
New Mexico	54	3	14	28	0	9	0
Arkansas	31	2	3	15	0	11	0
Rocky Mountain--total	197	12	23	125	2	33	2
Colorado	95	7	7	67	1	11	2
Wyoming	12	2	2	8	0	0	0
Utah	28	2	6	11	0	9	0
Montana	24	0	8	14	0	2	0
North Dakota	17	0	0	7	1	9	0
South Dakota	21	1	0	18	0	2	0
Western--total	808	141	75	396	10	174	12
California	715	132	62	342	10	158	11
Arizona	69	8	8	39	0	14	0
Nevada	24	1	5	15	0	2	1
Northwest--total	177	24	19	85	1	45	3
Washington	104	17	6	43	1	35	2
Oregon	57	5	12	31	0	8	1
Idaho	16	2	1	11	0	2	0
Alaskan Region--total	69	9	12	29	8	10	1
Pacific Region--total	29	3	0	12	2	11	1
Outside U.S.--total	74	4	3	11	4	49	3

NOTE: Puerto Rico and Virgin Islands are included in Outside U.S. total.
There were no women with current certificates for flight navigator.

1/ Data for control tower operators, flight engineers, and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers, and ground instructors, represent total ratings issued to date. These ratings retain their validity.

Table 16.--Active Nonpilot Certificates Held, by Category and Age group of Holder: 1977, 1976, 1973

Age group	Type of pilot certificates											
	Total nonpilots			Mechanic 1/			Parachute rigger 1/			Ground instructor 1/		
	1977	1976	1973	1977	1976	1973	1977	1976	1973	1977	1976	1973
Total.....	348,584	334,681	304,747	220,768	212,303	193,337	8,994	8,718	6,941	55,717	53,464	46,827
14-15	13	10	9	4	3	4	0	0	0	9	7	5
16-19	617	609	350	514	459	255	2	10	6	55	63	48
20-24	14,730	13,845	13,101	8,632	7,732	7,531	362	442	444	2,088	1,979	1,403
25-29	31,270	33,064	35,000	18,020	19,763	21,635	1,325	1,360	1,113	4,517	4,680	4,674
30-34	47,977	45,468	40,402	28,001	26,201	21,618	1,458	1,372	1,164	7,375	7,165	5,631
35-39	43,896	41,157	37,846	23,331	21,581	20,064	1,297	1,275	1,279	6,119	5,231	3,661
40-44	39,857	39,084	36,901	23,067	23,442	24,015	1,347	1,268	968	4,107	3,773	3,211
45-49	36,876	34,773	34,778	25,450	24,598	25,154	874	808	619	3,832	3,829	4,713
50-54	38,387	41,020	45,956	28,027	29,728	32,277	735	732	520	5,791	6,536	8,267
55-59	43,526	40,101	29,979	31,008	28,283	20,486	614	557	345	8,217	7,886	6,728
60 and over.	51,435	45,550	30,425	34,714	30,513	20,298	980	894	483	13,607	12,315	8,486
Total	Dispatcher 1/			Control tower operator			Flight navigator			Flight engineer		
	1977	1976	1973	1977	1976	1973	1977	1976	1973	1977	1976	1973
	5,972	5,838	5,527	25,107	24,584	23,250	2,155	2,214	2,636	29,871	27,560	26,229
14-15	0	0	0	0	0	0	0	0	0	0	0	0
16-19	0	1	1	46	76	40	0	0	0	0	0	0
20-24	30	17	20	3,309	3,461	3,602	0	0	1	309	214	100
25-29	225	244	300	5,561	5,913	5,349	1	2	18	1,621	1,102	1,911
30-34	576	629	603	5,490	4,787	3,333	31	64	318	5,046	5,250	7,735
35-39	691	630	618	3,290	3,452	4,208	401	498	641	8,767	8,490	7,375
40-44	677	685	652	3,353	3,233	3,383	561	537	426	6,747	6,146	4,246
45-49	650	651	700	2,272	1,867	1,186	317	272	342	3,481	2,748	2,084
50-54	750	775	952	815	894	1,435	303	328	527	1,966	2,027	1,978
55-59	962	965	857	757	719	577	406	408	307	1,562	1,283	679
60 and over.	1,411	1,241	824	216	182	137	135	105	56	372	300	141

1/ Numbers represent all certificates on record. No medical examination required.

III. PILOT CERTIFICATES ISSUED

Table 17.--Pilot Certificates Issued, by Category: Calendar Years 1973-77

Category of certificates	1973		1974		1975		1976		1977	
	Original issuances	Additional ratings	Original issuances	Additional ratings	Original issuances	Additional ratings	Original issuances	Additional ratings	Original issuances	Additional ratings
Pilot-total	207,305	39,656	185,914	38,700	193,888	35,395	204,489	39,112	277,025	44,708
Student	131,384	0	113,997	0	127,424	0	129,280	0	203,510	0
Private	53,140	9,797	48,501	9,866	49,733	9,734	55,583	12,618	54,657	15,104
Commercial	16,769	24,823	17,693	24,638	12,620	21,860	13,577	22,059	11,121	22,806
Airline transport	3,224	4,391	3,219	3,557	2,765	3,370	3,869	3,901	5,697	6,229
Helicopter (only)	1,719	507	1,298	387	866	251	1,064	276	944	328
Glider (only) ...	892	131	832	244	230	158	848	238	792	220
Lighter-Than-Air.	177	7	374	8	250	22	268	20	304	21
Non-pilot--total ...	15,857	8,514	12,410	7,777	12,491	7,137	15,069	7,751	16,066	7,267
Mechanic	8,355	3,329	6,618	2,748	6,930	2,606	8,501	3,149	9,121	3,307
Parachute rigger.	418	63	468	83	414	62	454	76	304	36
Ground instructor	2,506	732	2,416	852	2,193	714	2,390	707	2,404	729
Dispatcher	135	0	152	0	140	1	106	0	161	0
Control tower operator	1,863	4,227	1,733	3,979	2,164	3,657	2,382	3,686	1,645	3,008
Flight navigator.	70	0	7	1	4	0	2	0	16	0
Flight engineer .	2,510	163	816	174	646	97	1,234	133	2,415	187
Flight instructor certificates 1/..	6,199	3,102	6,312	3,399	5,233	3,427	6,137	4,718	6,352	6,397
Instrument ratings*.	0	19,649	0	19,012	0	16,495	0	18,155	0	18,764

1/ Not included in total.

*Special ratings shown on pilot certificates represented above; not to be added to total.

NOTE: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--Instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified and for instrument flying instruction.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

Air traffic control tower operator--junior/senior ratings for airports where holder may control air traffic.

Table 18.--Pilot Certificates Issued, by Class of Conductor: Calendar Year 1977

Category of certificate	Total ratings issued	Original issuances			Additional ratings				
		Total	Examiner	Inspector	No test	Total	Examiner	Inspector	No test
Total	345,066	293,091	69,960	211,588	11,543	51,975	40,419	7,972	3,584
Pilot--total	321,733	277,025	60,591	209,617	6,817	44,708	34,321	7,703	2,684
Student	203,510	203,510	0	203,510	0	0	0	0	0
Private	69,761	54,657	49,854	931	3,872	15,104	14,243	541	320
Commercial	33,927	11,121	8,359	376	2,386	22,806	18,797	1,762	2,247
Airline transport	11,926	5,697	1,203	4,470	24	6,229	960	5,263	6
Helicopter (only)	1,272	944	237	181	526	328	113	104	111
Glider (only) ...	1,012	792	713	71	8	220	192	28	0
Lighter-Than-Air.	325	304	225	78	1	21	16	5	0
Non-pilot--total ...	23,333	16,066	9,369	1,971	4,726	7,267	6,098	269	900
Mechanic	12,428	9,121	6,597	352	2,172	3,307	2,982	156	169
Parachute rigger.	340	304	190	59	55	36	25	10	1
Ground instructor	3,133	2,404	0	2	2,402	729	0	2	727
Dispatcher	161	161	40	116	5	0	0	0	0
Control tower									
Operator	4,653	1,645	1,645	0	0	3,008	3,008	0	0
Flight navigator.	16	16	0	13	3	0	0	0	0
Flight engineer .	2,602	2,415	897	1,429	89	187	83	101	3
Flight instructor*..	12,749	6,352	7	6,344	1	6,397	25	6,371	1

Note: Excludes renewals.

*Special ratings shown on pilot certificates represented above, not to be added to total.

Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument ratings.

Helicopter pilot--Instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified to instruct and for instrument flying instruction.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give ground instruction.

Air traffic control tower operator--junior/senior ratings for airports where holder may control air traffic.

Table 19.--Instrument Ratings Issued: 1977,1976,1973

Class of Certificate	1977	1976	1973	Percent change 1976-1977
Total--all groups	18,764	18,155	19,590	+3
Private pilots--total	<u>8,986</u>	<u>6,686</u>	<u>4,587</u>	<u>+34</u>
Private airplane (only)	8,415	6,135	4,069	+37
Private airplane, private glider	127	92	65	+38
Private airplane, commercial glider	4	4	1	0
Private airplane, private helicopter	26	12	12	+117
Private airplane, commercial helicopter ...	180	194	284	-7
Private airplane, private glider, private helicopter	0	0	1	0
Private airplane, other	234	249	155	-7
Commercial pilots--total	<u>9,232</u>	<u>10,793</u>	<u>13,445</u>	<u>-14</u>
Commercial airplane (only)	8,036	9,624	11,437	-17
Commercial airplane, private glider	97	125	43	-22
Commercial airplane, commercial glider	88	99	108	-11
Commercial airplane, private helicopter ...	12	1	6	-1100
Commercial airplane, commercial helicopter.	975	920	1,828	+6
Commercial airplane, private glider commercial helicopter	3	6	6	-50
Commercial airplane, commercial glider commercial helicopter	17	12	14	+42
Commercial airplane, other	4	6	3	-33
Rotorcraft pilots--total	<u>546</u>	<u>676</u>	<u>1,558</u>	<u>-19</u>
Commercial helicopter	540	671	1,554	-20
Airline transport helicopter	5	3	1	+67
Commercial helicopter, private glider	1	1	1	0
Commercial helicopter, commercial glider ..	0	1	0	0
Commercial helicopter, other	0	0	2	0

Table 20.--Student Certificates Issued, by Month: 1973-1977

Month	1977	1976	1975	1974	1973
Total	138,816	129,280	127,424	113,997	131,384
January	10,247	11,853	9,794	8,200	7,608
February	8,010	6,396	7,506	6,195	8,622
March	11,921	10,921	9,445	7,661	9,963
April	9,871	10,835	8,654	7,960	10,513
May	10,286	10,749	10,204	10,013	10,712
June	11,573	10,322	9,865	10,970	12,242
July	11,372	12,300	12,339	10,261	13,473
August	15,262	12,930	12,471	12,431	14,643
September	13,987	12,320	13,587	10,320	11,568
October	11,678	8,864	11,979	10,863	11,715
November	15,114	12,292	11,681	9,770	12,385
December	9,495	9,498	9,899	9,353	7,940

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